

contents of from 1 to 10% by weight, for example about 5% by weight, have proven successful in practice and generally give, in a single pass, coherent coatings which cover the substrate surface and have thicknesses which can be more than 0.1  $\mu\text{m}$ .

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The graft copolymerization of the monomers applied to the activated surfaces may usefully be initiated by radiation in the short-wave segment of the visible range or in the long-wave segment of the UV range of electromagnetic radiation. For example, the radiation from a UV excimer of wavelengths from 250 to 500 nm, preferably from 290 to 320 nm, is very suitable. Mercury vapor lamps are also suitable here as long as they have substantial proportions of radiation in the abovementioned ranges. The exposure times are generally from 10 seconds to 30 minutes, preferably from 2 to 15 minutes.

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- 15 Graft copolymerization can also be achieved by a process described in European Patent Application 0 872 512 and based on a graft polymerization of monomer molecules and initiator molecules incorporated by swelling.

- The novel process may use other aliphatically unsaturated monomers, besides the monomers functionalized by means of a secondary amino group. Thus, the monomer mixture may also comprise an aliphatically unsaturated monomer at least singly functionalized by means of a secondary amino group and acrylates or methacrylates, e.g. acrylic acid, tert-butyl methacrylate, methyl methacrylate, styrene, vinyl chloride, vinyl ethers, acrylamides, acrylonitriles, olefins (ethylene, propylene, butylene and isobutylene), allyl compounds, vinyl ketones, vinylacetic acid, vinyl acetates or vinyl esters.

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- Even without grafting to a substrate surface, the antimicrobial polymers prepared according to the novel process made from aliphatically unsaturated monomers which have been at least singly functionalized by means of a secondary amino group show microbicidal or antimicrobial behavior.

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If the novel process is used directly on the substrate surface without grafting, conventional free-radical initiators may be used. Examples of initiators which